



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.                  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|---------------------|------------------|
| 10/814,261                       | 04/01/2004  | Yoshihiro Majima     | 2018-866            | 6941             |
| 23117                            | 7590        | 09/19/2006           | EXAMINER            |                  |
| NIXON & VANDERHYE, PC            |             |                      | NGUYEN, TU MINH     |                  |
| 901 NORTH GLEBE ROAD, 11TH FLOOR |             |                      |                     |                  |
| ARLINGTON, VA 22203              |             |                      | ART UNIT            | PAPER NUMBER     |
|                                  |             |                      | 3748                |                  |

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 10/814,261             | MAJIMA ET AL.       |
| <b>Examiner</b>              | <b>Art Unit</b>        |                     |
| Tu M. Nguyen                 | 3748                   |                     |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 August 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 27,28 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 27,28 and 30-33 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 February 2006 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. 10/152,995.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. An Applicant's Request for Continued Examination (RCE) and an Applicant's Amendment filed on August 25, 2006 have been entered. Claims 1, 2, 5-11, and 29 have been canceled; and claims 27, 28, and 30-33 have been amended. Overall, claims 27, 28, and 30-33 are pending in this application.

### *Drawings*

2. The formal drawing of Figure 1 filed on February 28, 2006 has been approved for entry.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 27, 28, 30, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Tsunooka (U.S. Patent 6,557,524).

As shown in Figures 1 and 5, Tsunooka discloses a control apparatus and a control method for an internal combustion engine (10), the apparatus comprising:

- a brake booster (18) for increasing a brake force of a brake by using a negative pressure of an intake pipe (34) employed in the internal combustion engine; and

- an ignition retarding control means (12, 54) for executing ignition retarding control to retard an ignition timing at a cold start in order to promote an operation to heat a catalyst for cleaning an exhaust gas (see lines 31-39 of column 9),

wherein the ignition retarding control means starts the ignition retarding control after a predetermined time lapses since a start, and

wherein the predetermined time represents a period of time beginning at a start of the engine and ending at a time that the negative pressure ( $B_{VAC}$ ) of the brake booster or the negative pressure of the intake pipe (a pressure sensor (38) detects the negative pressure ( $B_{VAC}$ ) of the brake booster (lines 37-42 of column 4) and the negative pressure of the intake pipe (lines 1-11 of column 4)) reaches a predetermined value so that a proper negative brake force of the brake booster can be assured (from Figure 5, right after an engine start, a negative pressure ( $B_{VAC}$ ) of the brake booster is detected in step 202, if  $B_{VAC}$  has not reached a predetermined value (step 204 with NO answer), an ignition timing is maintained on an advance side of the ignition timing when a difference ( $B_{VAC} - B_0$ ) between the negative pressure of the brake booster and a predetermined value ( $B_0$ ) is large (see lines 22-35 of column 11 and lines 1-9 of column 12)).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsunooka in view of Keeler et al. (U.S. Patent 5,682,317).

As shown in Figures 1 and 5, Tsunooka discloses a control method for an internal combustion engine (10), the method comprising:

- increasing a brake force of a brake booster (18) by using a negative pressure of an intake pipe (34) employed in the internal combustion engine; and  
- executing ignition retarding control with an ignition retarding control means (12, 54) to retard an ignition timing at a cold start in order to promote an operation to heat a catalyst for cleaning an exhaust gas (see lines 31-39 of column 9),

wherein execution of the ignition retarding control is started after a predetermined time lapses since an engine start, and

wherein the predetermined time represents a period of time beginning at a start of the engine and ending at a time that the negative pressure ( $B_{VAC}$ ) of the brake booster or the negative pressure of the intake pipe (a pressure sensor (38) detects the negative pressure ( $B_{VAC}$ ) of the brake booster (lines 37-42 of column 4) and the negative pressure of the intake pipe (lines

1-11 of column 4)) reaches a predetermined value so that a proper negative brake force of the brake booster can be assured (from Figure 5, right after an engine start, a negative pressure ( $B_{VAC}$ ) of the brake booster is detected in step 202, if  $B_{VAC}$  has not reached a predetermined value (step 204 with NO answer), an ignition timing is maintained on an advance side of the ignition timing when a difference ( $B_{VAC} - B_0$ ) between the negative pressure of the brake booster and a predetermined value ( $B_0$ ) is large (see lines 22-35 of column 11 and lines 1-9 of column 12)).

Tsunooka, however, fails to disclose that the method further comprises a step of storing the predetermined time in a memory for later use.

As shown in Figures 13 and 14, Keeler et al. disclose a virtual emissions monitor for automobile and associated control system. As indicated on lines 18-40 of column 13, Keeler et al. teach that it is conventional in the art to store a history of the characteristics of an engine in a memory for downloading at a later time for the purpose of monitoring the operation of the vehicle and the engine. It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the teaching by Keeler et al. in the method of Tsunooka, since the use thereof would have been routinely practiced by those with ordinary skill in the art.

#### ***Prior Art***

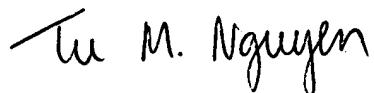
7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of one patent: Kidokoro et al. (U.S. Patent 6,691,675) further disclose a state of the art.

***Communication***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TMN

Tu M. Nguyen

September 15, 2006

Primary Examiner

Art Unit 3748